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Juha-Pekka Koskinen

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09/15/2009

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EXAMINER

AJIBADE AKONAI, OLUMIDE

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/524,055	Applicant(s) KOSKINEN ET AL.	
	Examiner OLUMIDE T. AJIBADE AKONAI	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-14 and 16-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-14 and 16-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on June 24 2009 has been entered.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 28 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 28 is directed to a computer program product embodied on a computer readable medium; however, the specification does not mention a computer readable medium. Since the specification does not mention a computer readable medium, the examiner is providing the broadest reasonable interpretation, which means that the medium could be non-statutory subject matter such as a signal, carrier wave. The applicants should clarify that the computer readable medium is directed only to statutory subject matter.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. Claims 1, 3, 4, 7-11, 13, 14, 16, 17, 20-22, 24, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wenzel et al 7,471,634 (hereinafter Wenzel)** in view of **Chaney 6,947,724**.

Regarding **claim 1**, Wenzel discloses a method, comprising: establishing an accounting session between a network element (AAA server, see figs. 1 and 3, col. 7, lines 29-34) and a charging function (HA, see figs. 1 and 3, col. 7, lines 29-34) for the session (initiating accounting for a wireless communication session, see fig. 3, col. 7, lines 29-55), wherein the network element comprises a gateway of an internet protocol based communication system (see figs. 1 and 3, col. 6, lines 17-29, col. 7, lines 29-34); initiating a change in the accounting session on the initiation of the charging function (transmitting a request to stop accounting for old FA, and transmitting a request to start accounting for the new FA when the mobile nodes moves from the old FA to the new FA, see fig. 8, col. 10, lines 20-50); and charging for services in the communication system based on the accounting session (see fig. 8, col. 10, lines 20-50), wherein the initiating a change in the accounting session occurs during an ongoing session and comprises transmitting a request to update the accounting session from the charging function to the network element (HA transmitting a request to the AAA server stop accounting for the communication session on old FA, and transmitting a request to start accounting for the communication session on the new FA when the mobile nodes moves from the old FA to the new FA, see fig. 8, col. 10, lines 20-50).

Wenzel does not specifically disclose wherein the initiated change comprises performing at least one of an increase and decrease in charges for services currently implemented in the ongoing session.

In the same field of endeavor, Chaney discloses a 3GPP network (see fig. 1, col. 3, lines 58-60) comprising billing entities to initiate a charge to a user of a mobile node for a wireless communication session (see fig. 1, col. 6, lines 9-19), and wherein the charges can be increased or decreased during the wireless communication (see fig. 4, col. 6, lines 53-67, col. 7, lines 1-19).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Chaney, by increasing or decreasing the charges applied to a mobile station accounting session changes, into the system of Wenzel for the benefit of billing a mobile node at a higher rate when the mobile node roams into an area with high traffic and at lower rate when the mobile node roams into an area with low traffic.

Regarding **claims 14 and 27**, Wenzel discloses a charging element (HA, see figs. 1 and 3, col. 7, lines 29-34), comprising: a monitor unit (or monitor means) configured to monitor charging in an internet protocol based communication system (see col. 7, lines 44-55); an establishment unit (or establishment means) configured to establish an accounting session with an application (initiating accounting for a wireless communication session, see fig. 3, col. 7, lines 29-55); an information unit configured to inform a network element (AAA server, see figs. 1 and 3, col. 7, lines 29-34) configured to control an

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associated communication session of the accounting session, wherein the network element comprises a gateway of the internet protocol based communication system (initiating accounting for a wireless communication session, see fig. 3, col. 7, lines 29-55); and an initiation unit (or initiating means) configured to initiate a change in the accounting session (transmitting a request to stop accounting for old FA, and transmitting a request to start accounting for the new FA when the mobile nodes moves from the old FA to the new FA, see fig. 8, col. 10, lines 20-50), said change occurring during an ongoing session, wherein the initiation unit comprises a transmission unit configured to receive a request to update the accounting session (HA transmitting a request to the AAA server stop accounting for the communication session on old FA, and transmitting a request to start accounting for the communication session on the new FA when the mobile nodes moves from the old FA to the new FA, see fig. 8, col. 10, lines 20-50).

Wenzel does not specifically disclose wherein the change comprises performing at least one of an increase and decrease in charges for services currently implemented in the ongoing session.

In the same field of endeavor, Chaney discloses a 3GPP network (see fig. 1, col. 3, lines 58-60) comprising billing entities to initiate a charge to a user of a mobile node for a wireless communication session (see fig. 1, col. 6, lines 9-19), and wherein the charges can be increased or decreased during the wireless communication (see fig. 4, col. 6, lines 53-67, col. 7, lines 1-19).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Chaney, by increasing or decreasing the charges applied to a mobile station accounting session changes, into the system of Wenzel for the benefit of billing a mobile node at a higher rate when the mobile node roams into an area with high traffic and at lower rate when the mobile node roams into an area with low traffic.

Regarding **claim 24**, Wenzel discloses a communication system, comprising: a network element configured to control a session for the provision of services in an internet protocol based communication system (AAA server, see figs. 1 and 3, col. 7, lines 29-34), wherein the network element comprises a gateway of the internet protocol based communication system (see figs. 1 and 3, col. 6, lines 17-29, col. 7, lines 29-34); an application for the session (initiating accounting for a wireless communication session, see fig. 3, col. 7, lines 29-55); and a charging function (HA, see figs. 1 and 3, col. 7, lines 29-34), wherein at least one accounting session is configured to be established between the charging function and at least one of the network element, the application, or the control function (initiating accounting for a wireless communication session, see fig. 3, col. 7, lines 29-55), and wherein the charging function is configured to initiate a change in the at least one accounting session during an ongoing session by transmitting a request to update the accounting session to the network element (HA transmitting a request to the AAA server stop accounting for the communication session on old FA, and transmitting a request to start

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accounting for the communication session on the new FA when the mobile nodes moves from the old FA to the new FA, see fig. 8, col. 10, lines 20-50).

Wenzel does not specifically disclose a control function for the session and wherein the initiated change comprises performing at least one of an increase and decrease in charges for services currently implemented in the ongoing session.

In the same field of endeavor, Chaney discloses a 3GPP network (see fig. 1, col. 3, lines 58-60) comprising a control function (CSCF, see fig. 1, col. 3, lines 62-67) and billing entities to initiate a charge to a user of a mobile node for a wireless communication session (see fig. 1, col. 6, lines 9-19), and wherein the charges can be increased or decreased during the wireless communication (see fig. 4, col. 6, lines 53-67, col. 7, lines 1-19).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Chaney, by increasing or decreasing the charges applied to a mobile station accounting session changes, into the system of Wenzel for the benefit of billing a mobile node at a higher rate when the mobile node roams into an area with high traffic and at lower rate when the mobile node roams into an area with low traffic.

Regarding **claim 28**, Wenzel discloses a computer program product embodied on a computer readable medium, and encoding instructions for performing, when executed on a computer: establishing an accounting session between a network element (AAA server, see figs. 1 and 3, col. 7, lines 29-34) and a charging function (HA, see figs. 1 and 3, col. 7, lines 29-34) for the session

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(initiating accounting for a wireless communication session, see fig. 3, col. 7, lines 29-55), wherein the network element comprises a gateway of an internet protocol based communication system (see figs. 1 and 3, col. 6, lines 17-29, col. 7, lines 29-34); initiating a change in the accounting session on the initiation of the charging function (transmitting a request to stop accounting for old FA, and transmitting a request to start accounting for the new FA when the mobile nodes moves from the old FA to the new FA, see fig. 8, col. 10, lines 20-50); and charging for services in the communication system based on the accounting session, wherein the initiating a change in the accounting session occurs during an ongoing session and comprises transmitting a request to update the accounting session from the charging function to the network element (HA transmitting a request to the AAA server stop accounting for the communication session on old FA, and transmitting a request to start accounting for the communication session on the new FA when the mobile nodes moves from the old FA to the new FA, see fig. 8, col. 10, lines 20-50).

Wenzel does not specifically disclose and wherein the initiated change comprises performing at least one of an increase and decrease in charges for services currently implemented in the ongoing session.

In the same field of endeavor, Chaney discloses a 3GPP network (see fig. 1, col. 3, lines 58-60) comprising a control function (CSCF, see fig. 1, col. 3, lines 62-67) and billing entities to initiate a charge to a user of a mobile node for a wireless communication session (see fig. 1, col. 6, lines 9-19), and

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wherein the charges can be increased or decreased during the wireless communication (see fig. 4, col. 6, lines 53-67, col. 7, lines 1-19).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Chaney, by increasing or decreasing the charges applied to a mobile station accounting session changes, into the system of Wenzel for the benefit of billing a mobile node at a higher rate when the mobile node roams into an area with high traffic and at lower rate when the mobile node roams into an area with low traffic.

Regarding **claims 3 and 16** as applied to claims 1 and 14, Wenzel further discloses wherein the transmitting the request further comprises transmitting an update accounting request message (see fig. 8, col. 10, lines 39-46).

Regarding **claims 4 and 17** as applied to claims 1 and 14, Wenzel further discloses responsive to the request, implementing, in the network element, a change in the charging of the accounting session (see fig. 8, col. 10, lines 39-46).

Regarding **claims 7 and 20** as applied to claims 1 and 14, Wenzel further discloses configuring the network element is a controller of a communications session relating to the accounting session (HA, see figs. 1 and 3, col. 7, lines 29-34).

Regarding **claim 8** as applied to claims 1, Wenzel further discloses wherein the establishing an accounting session comprises establishing an accounting session between the charging function and a further network element (see fig. 8, col. 10, lines 20-46).

Regarding **claim 9** as applied to claims 8, Wenzel further disclose establishing an accounting session between an application for the accounting session and the charging function (initiating accounting for a wireless communication session, see fig. 3, col. 7, lines 29-55).

Regarding **claim 10** as applied to claims 9, Wenzel as modified by Chaney discloses the claimed limitation. Chaney further discloses establishing an accounting session between a control function for the accounting session and the charging function (see fig. 4, col. 6, lines 53-67, col. 7, lines 1-19).

Regarding **claim 11** as applied to claims 9, Wenzel further discloses wherein the initiating the change in the accounting session between the network element controlling the session and the charging function is responsive to a change in at least one of the accounting session between the charging function and a further network element or the accounting session between an application for the accounting session and the charging function (see fig. 8, col. 10, lines 20-46).

Regarding **claims 13, 21, and 22** as applied to claims 1 and 14, Wenzel further discloses configuring the internet protocol based communication system to support a diameter internet protocol and the request is configured to be transmitted using a diameter internet protocol (see col. 6, lines 33-47).

Regarding **claim 26** as applied to claim 24, Wenzel further discloses a plurality of accounting sessions, wherein the charging function initiates a change in one accounting session of the plurality of accounting sessions responsive to a

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change in another accounting session of the plurality of accounting sessions (see fig. 8, col. 10, lines 20-46).

6. Claims 5, 6, 18, 19, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wenzel et al 7,471,634 (hereinafter Wenzel)** in view of **Chaney 6,947,724** as applied to claims 1 and 24 above, and further in view of **Rygula et al 6,973,309 (hereinafter Rygula)**.

Regarding **claims 5 and 18** as applied to claims 1 and 14, Wenzel as modified by Chaney disclose the claimed limitation except responsive to the request, transmitting, by the network element, an acknowledgement to the charging function. Rygula however discloses transmitting an accounting acknowledgement message from an AAA server to a network device in response to an accounting message from the network device (see fig. 12, col. 22, lines 41-61). It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Rygula by transmitting an accounting acknowledgement message to a network device in response to accounting request message, into the system of Wenzel as modified by Chaney for the benefit of indicating to the network device that the accounting session information of a wireless communication session for a mobile communication device has been updated.

Regarding **claims 6 and 19** as applied to claims 5 and 18, Wenzel as modified by Chaney and Rygula disclose the claimed limitation. Rygula further discloses wherein the transmitting the acknowledgement comprises transmitting

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an update accounting acknowledgement message (see fig. 12, col. 22, lines 41-61).

Regarding **claim 23** as applied to claim 21, Wenzel as modified by Chaney disclose the claimed limitation except wherein the element is configured, to transmit an acknowledgement to the charging function responsive to the request, wherein the acknowledgement is configured to be transmitted using a diameter internet protocol. Rygula however discloses transmitting an accounting acknowledgement message from an AAA server to a network device in response to an accounting message from the network device (see fig. 12, col. 22, lines 41-61). It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Rygula by transmitting an accounting acknowledgement message to a network device in response to accounting request message, into the system of Wenzel as modified by Chaney for the benefit of indicating to the network device that the accounting session information of a wireless communication session for a mobile communication device has been updated.

7. Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wenzel et al 7,471,634 (hereinafter Wenzel)** in view of **Chaney 6,947,724** as applied to claims 1 and 24 above, and further in view of **Barna et al 6,999,449 (hereinafter Barna)**.

Regarding **claims 12 and 25** as applied to claims 1 and 24, Wenzel as modified by Chaney discloses the claimed invention except wherein charging of the charging function comprises pre-paid charging. Barna however, discloses

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associating the accounting session with a pre-paid charging function (pre-paid server PPS 15, see fig. 1, col. 6, lines 9-10). It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Barna, by implementing a pre-paid accounting service at an accounting server, into the system of Wenzel as modified by Chaney for the benefit of providing per-paid accounting services in an IP network.

Response to Arguments

8. Applicant's arguments with respect to claims 1, 14, 24, 27, and 28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLUMIDE T. AJIBADE AKONAI whose telephone number is (571)272-6496. The examiner can normally be reached on M-F, 8.30p-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OA

/Charles N. Appiah/
Supervisory Patent Examiner, Art Unit 2617